

had thus resorted to these feeding places to obtain ordinary food, in the same manner that queens, males, and young ants receive it, viz., by disgorgement from the abdomens of repletes. The latter commonly yielded the honey-dew complacently, but sometimes were seized and arrested by the pensioners, occasionally with great vigor.

A number of experiments were described leading to the conclusion that there was complete amity between the ants of a large portion of the field, embracing some 1600 hills and countless millions of creatures. Insects from hills widely separated always fraternized completely when transferred. A number of ants collected from various hills fraternized in an artificial nest, harmoniously building galleries and caring for the cocoons.

It was found that ants immersed in water when replaced upon the hills were invariably attacked as enemies; the assailants, being immersed, were themselves in turn assaulted. A number of experiments were made which indicated that the bath had temporarily destroyed the peculiar odor or other property by which the insects recognized their fellows.

The variety of *F. rufa* which had colonized in vast numbers on the cliff at Rockland opposite the steamboat landing, as observed for the last three summers, were found that morning to have abandoned the place. No trace of them could be seen in the vicinity. The crowds of human beings who occupied the spot during the late International regatta had evidently dispersed the republic.

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OCTOBER 17.

The President, Dr. RUSCHENBERGER, in the chair.

Thirty-six members present.

A paper entitled "Descriptions of some Vertebrate Remains from the Fort Union Beds of Montana," by Edward D. Cope, was presented for publication.

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OCTOBER 24.

The President, Dr. RUSCHENBERGER, in the chair.

Thirty-seven members present.

*On Webs of New Species of Spiders.*—Mr. McCook called attention to several new species of spiders, with the view to illustrate the existence of mixed habits in construction of the web. The first of the two great groups of the Araneæ, viz., the

Sedentary Spiders, consists of the four sub-orders, (1) orb-weavers (*Orbitelariæ*), (2) line-weavers (*Retitelariæ*), (3) tube-weavers (*Tubitelariæ*), and (4) tunnel-weavers (*Territelariæ*). The first web, that of *Epeira triaranea*, n. sp., exhibits quite distinctly the characteristics of the first three of the above sub-orders. The orb, which is the primary characteristic of the snare of this arachnid, is partially inclosed by a web having quite as distinctly the characteristics of the line-weavers. This secondary snare extends several inches above the orb. At the top is a tertiary snare characteristic of the third sub-order. It is a mortar-shaped tube, of white, close textured silk, opening downward. Within this the spider dwells, clasping with its fore-claws a thick thread or free radius which is attached to the centre of the orb. He had not been able to determine whether the secondary snare is used, as with the line-weavers, in taking prey, or is possibly a simple protection against hymenopterous enemies. The tube or tent is quite frequent in connection with the orb-weaver's snare, but the mixture of the line-weaver's habit is rare, having been observed in but one other Epeiroid, *Epeira labyrinthica* of Hentz, the architecture of which was described. A possible exception was noted in the web of *Argiope fasciata*, one of the most beautiful and interesting of our indigenous spiders. In three instances the orb-shaped web of *A. fasciata* was found protected on either side by a cone-shaped mass of right lines. In all other webs of the same species observed, this mixed habit was not indicated. Possibly it may be in the course of development. It was suggested that the use of this auxiliary web might be to protect the snare from destruction, or to save the animal from enemies. A like tendency to mixed webs was observed in a new species of tube-weaver named provisionally *Tegenaria philoteichos*. It is found in vast numbers upon the brick walls and fences of our city. Its web shows distinctly the characteristics of the orb-weaver's snare in the radial lines issuing from the opening or openings of the central tube. These lines are overlaid upon each other, and with the adhering street dust, present the appearance of rude lace-work. The outside of the wall seems curiously to be preferred. The apparent affinity of this spider to *Ergatis benigna* of Europe, and *Theridion morologum* Hentz, was shown by photograph and description. The latter named spider much resembles *T. philoteichos* in appearance, although uniformly of a far lighter hue. Its web, cocoon, and general habits greatly differ. The one appears to be a creature of the city, the other of the fields.